

# Miombo Network Meeting

Miombo Woodlands - Mozambique Case

Regina Cruz and Natasha Ribeiro

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Maputo

# Outline

- Introduction: Forest cover in Mozambique
- Deforestation rates
- Main drivers behind
- Current status of Miombo woodland resources
- National mitigations measures
- Ongoing research/development projects
- Ongoing international support in the country
- Science and Earth Observation needs
- Capacity development needs

# Forest designation and zoning\*

- Productive forests cover 26 907 100 ha
- Conservation Forests cover 4 255 500 ha
- Protection forests cover 8 905 400 ha

\*AIFM 2007.

# Introduction: Forest cover\*

- Forest cover 40 068 000 ha:
  - Dense forest 22 518 700 ha;
  - Open Forest 16 390 000 ha;
  - Mangrove 357 000 ha
  - Open Forest in wetlands 802 300 ha
- Other wooded vegetation 14 712 200 ha:
  - Thickets 1 093 100 ha;
  - Shrublands 8 051 000 ha;
  - Forests with Shifting cultivation 5 568 100 ha

\*AIFM, 2007

# Deforestation rates

- Manica Province - 1990-2004
  - Annual change 30 962 ha/year
  - Annual rate of change 0.81% /yearSource: Jansen *et al.* 2006.
- National - 1990-2004
  - Annual change 219 000 ha/year
  - Annual rate of change 0.58% /year,Source: AIFM 2007

# Deforestation rates - Mangrove area\*

Year	Mangrove area (1000 ha)	Annual change (ha)	Annual deforestation rate (%)
1972	408		
1990	396	67	0.2
2004	357	217	0.7

\* Source: AIFM 2007

# Main Drivers Behind

- Shifting cultivation;
- Commercial Agriculture;
- Firewood and Charcoal production;

Sources: Cangela, A. *Not published*; Nhantumbo, I. Rombe, R. & Guedes, G. 2013; Siteo; Salomão and Wertz-Kanounnikoff 2012; AIFM 2007;

# Current status of Miombo woodland resources

- Timber in 2012\*
  - Number of Forest Concessions, 190
  - Area 7 596 204 (ha)
- Non-wood Forest Products (no data available)
  - Plant products: food, fodder, raw material for medicines.....
  - Animal products: Living animals, hides, skins and trophies, wild honey and bee-wax
- Social issues
  - Cultural and spiritual importance for people
  - Source of basic needs since tach roof, building poles, medices, food, live for local communities
- Ecological
  - Watershed protection

\*DNTF 2013; FRA 2010; Campbell 1996



# National mitigations measures

- REDD
- Other Carbon Initiatives
- Forest Management programmes

# Ongoing research/development projects

1. Faculty of Agronomy and Forestry Engineering of University Eduardo Mondlane since 2000 - doing research on ecology and dynamics of the forest environment;
2. SADC Initiative MRV System;
3. Methodology for analysis of the various components, biophysical, social and economics. Forestry Engineering Department of University Eduardo Mondlane

Source: Nhantumbo, I. Rombe, R. & Guedes, G. 2013

## Ongoing research/development projects/International Support (Cont.)

3. Spatial analysis of the causes of deforestation and forest degradation (FAEF-UEM)\*;

4. Estimation of Biomass and carbon stocks using local allometric equations and EO data (Ikonos, Alos palsar)

...in collaboration with University of Edimburgh and IIED

Source: Ribeiro, Bandeira 2012; Ribeiro, Saatchi, Shugart and Washington-Alen 2008

# Ongoing international support in the country

- Project with CIFOR and ICRAF for developing a sentinel site for Southern Africa's Miombo Woodlands in north-western Mozambique;
- Technical Cooperation and Grant Aid of Japan Government-JICA to DNTF/MINAG-Project to establish REDD+ Monitoring System

Sources: Macuacua, J. 2012; Cangela, A. Not published ;

# Ongoing international support in the country

- Testing T REDD+ in Center of Mozambique, Beira Corridor (International Institute for Environment and Development, MICAIA e University Eduardo Mondlane, - Faculty of Agronomy and Forestry Engineering (Institute of Agricultural Research, UoE and local universities and CDS; Funded by the Norwegian Government

Source: Nhantumbo, I. Rombe, R. & Guedes, G. 2013

# Science and Earth Observation needs

- Identification and quantification changes of Miombo;
- Quantify Non Forest Products
- Payment for environmental services (REDD+ and other)

EO needs: optical (ikonos, Geoeye and other high resolution images)

Radar imagery (Alos Palsar)

# Capacity development needs

- Awareness raising
- Training
- Institutional
  - Forest monitoring
- Law enforcement

Thank you!